



Policy Notes

September 2000

No. 2000-11

Improving Tax Administration: A New View from the Theory of Tax Evasion in a Corrupt Regime

*Rosario G. Manasan**

*"Tax administration is tax policy."
Casanegra de Jantscher*

In the past two decades, a number of reforms have taken place in the country's tax structure. However, despite these reforms, serious problems continue to prevail in the Philippines' tax administration system as manifested in the continued high levels of tax evasion, thereby suggesting that modifications in the tax structure alone are not enough.

Given this, this Policy Notes examines new perspectives espoused in recent theoretical literature on tax evasion which call for a need to reassess existing tax administration practices that have a bearing on economic incentives affecting the behavior of two major actors in the tax compliance process: the taxpayer and the tax collector.

Hopefully, the new theoretical views would help in coming up with better and more comprehensive measures in improving tax administration.

Recent efforts in tax restructuring

The government undertook an extensive restructuring of the tax system in 1986. While the previous efforts to change tax policy were piecemeal in nature, the 1986 Tax Reform Package represented the first attempt at a comprehensive reform of the country's tax system. Revenue generation was not the sole consideration in its design as equity and efficiency objectives both received considerable weight.

The major components of the 1986 Tax Reform Package were:

- * shift from the schedular to a more global approach in taxing individual income from compensation, business, trade and exercise of profession;¹
- * increase in personal and additional exemptions;
- * separate treatment of income of spouses;
- * increase in the final withholding tax rate on interest income and royalties, from 17.5 percent and 15 percent, respectively, to a uniform rate of 20 percent;
- * phase-out of the final withholding tax previously levied on dividends;

**The author is Senior Research Fellow at the Philippine Institute for Development Studies.*

¹Passive income like interest income, royalties and capital gains, however, continue to be subjected to a final withholding tax.

PIDS Policy Notes are observations/analyses written by PIDS researchers on certain policy issues. The treatise is holistic in approach and aims to provide useful inputs for decisionmaking.

The views expressed are those of the author and do not necessarily reflect those of PIDS or any of the study's sponsors.

- * unification of the earlier dual tax rate (of 25 and 35 percent) levied on corporate income to 35 percent;
- * introduction of the value added tax (VAT) in place of the sales/turnover tax and a host of other taxes;
- * conversion of unit rates formerly used for excise taxes to *ad valorem* rates;
- * abolition of export taxes; and
- * further reduction in tariff rates.²

From 1987 onwards, the government had to introduce more tax changes primarily to respond to the need to raise more revenues within the context of a series of fiscal adjustment programs. Not all, however, were consistent with the spirit of the 1986 reform package. Some, like the import levy imposed in 1991, were put in place because they were administratively and politically convenient. However, they were generally seen as highly distortionary and having a perverse effect on long-term growth.

What are some of these changes?

In 1992, the Simplified Net Income Taxation Scheme (SNITS) was introduced. The SNITS increased personal exemptions, restricted deductions that can be claimed against gross income, reverted the individual income tax system to the schedular approach by imposing differential rate schedules on compensation income and business/professional income, and increased the lowest marginal tax rate applicable to business/professional income from 0 percent to 3 percent while reducing the highest marginal tax rate from 35 percent to 30 percent. In that year, the Bureau of Internal Revenue (BIR) also expanded the coverage of the withholding tax system.

Then, in 1998, the Comprehensive Tax Reform Package (CTRP) was passed into law. With its enactment, the pendulum once again swung toward the global system of income taxation. It imposed a unified rate schedule for both compensation and business/professional income of individuals. The rate schedule under CTRP has 7 brackets in contrast to the old schedule which had 11 brackets

for compensation income and 5 brackets for business/professional income. The 1998 individual income tax legislation also increased personal and additional exemptions even as it allowed the deduction of premium payments for health and/or hospitalization insurance from gross income.³

The flip-flopping character of tax legislation over the years is also evident for indirect taxes. For instance, in 1996, the coverage of the VAT was broadened to include services with the passage of the Expanded Value Added Tax (EVAT) but Republic Act 8241 (which took effect in January 1997) expanded the list of items that are exempted under the EVAT. Similarly, Republic Act 8240 (which became effective January 1997) reverted the *ad valorem* excise tax on fermented liquor, distilled spirits and cigarettes to the specific scheme.⁴

Tax effort

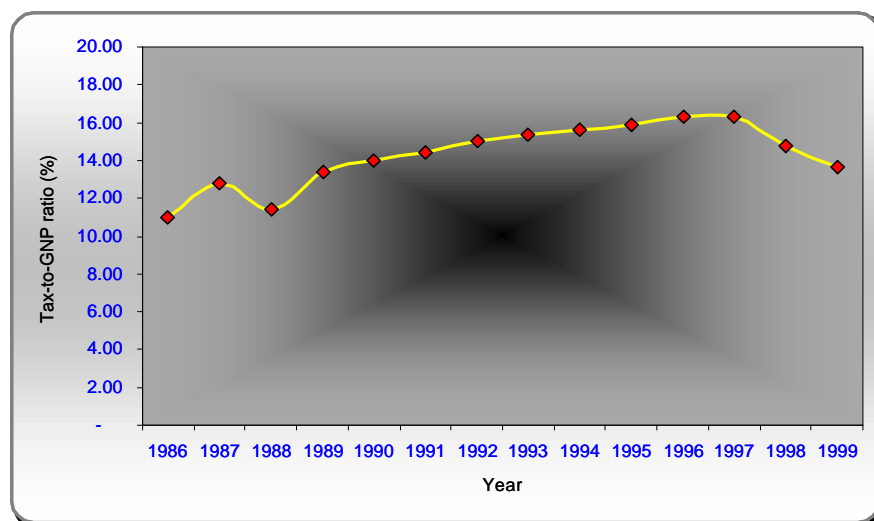
Concomitant with these developments, significant gains in tax effort have been achieved with the ratio of the total tax revenue to GNP climbing from an average of 11.3 percent of GNP in 1975-1985 to a peak of 16.3 percent in 1997 (Figure 1). Said improvement, however, appears to have tapered off between 1992 and 1997. While tax effort increased by a hefty 3 percentage points in the 4-year period between 1986 and 1990, it rose by a mere 1 percentage point in the 4-year period between 1992 and 1997. Moreover, tax effort started to tumble with the onset of the Asian financial crisis as the tax-to-GNP ratio dropped to 14.8 percent in 1998. It is alarming that this deterioration remains unabated as the tax

²The last item is not usually viewed as part of the TxRP but as the main element of the Tariff Reform Program (TRP).

³The deduction of premium payments for health/hospitalization insurance from gross income may not exceed P2,400 per year per family. Moreover, such deduction is applicable only if the total gross income of the taxpayer is P250,000 or less.

⁴Prior to this, cigarettes were taxed on an *ad valorem* basis. This change was made in response to tax avoidance/evasion practices of manufacturers under the old system (e.g., transfer pricing and misclassification of brands).

Figure 1. Tax effort, 1986-1999



effort slipped further to 13.7 percent in 1999 even as the economy posted some recovery.

Tax evasion

Collectively, the various tax measures installed since 1986 have served to simplify the tax structure and to broaden the tax base (by limiting deductions and exemptions). As such, together with the expanded coverage and

Table 1. Level of tax evasion from the individual income tax, 1985-1999

Year	Evaded taxes (Pmillion)	Evasion rate (%)
1985	16,037.60	73.10
1986	9,564.70	61.70
1988	19,940.30	71.50
1990	29,994.30	64.90
1991	29,599.46	60.04
1992	37,108.14	63.71
1993	31,743.61	57.62
1994	24,529.98	46.20
1995	35,651.09	51.74
1996	51,997.67	54.35
1997	79,830.80	59.41
1998	86,842.50	58.60
1999	105,740.00	60.81

Sources: 1985-1995, Manasan 1998
1996-1999, author's estimates

stricter implementation of tax withholding schemes, they are expected to promote tax compliance.

Updated estimates of tax evasion confirm improved tax compliance between 1985 and 1995. Thus, the evasion rate for the individual income tax declined from 73.1 percent in 1985 to 60.0 percent in 1991 and 51.7 percent in 1995 (Table 1) while that for the VAT on domestic sales decreased from 68.2 percent in 1985 to 66.8 percent in 1991 and 60.0 percent in 1995 (Table 2).

However, tax evasion remains prevalent and has worsened in more recent years. To wit, the evasion rate for the individual income tax shot up to 60.8 percent in 1999 while that for the VAT on domestic

Table 2. Tax evasion from VAT on domestic sales, 1985-1999

Year	Evaded taxes (Pmillion)	Evasion rate (%)
1985	6,432.00	68.20
1989	26,279.50	77.20
1990	26,315.70	66.80
1991	30,347.30	66.80
1992	37,290.00	67.31
1993	32,982.00	59.24
1994	36,620.00	58.99
1995	43,377.00	60.08
1996	67,151.00	62.13
1997	67,722.00	58.89
1998	79,769.00	62.66
1999	92,357.00	62.61

Sources: 1985-1995, Manasan 1998
1996-1999, author's estimates

sales inched up to 62.6 percent. These developments imply serious problems in tax administration. They also suggest that one cannot rely on modifications in the tax structure alone to correct shortcomings in tax administration.

A look at the new models of tax evasion

The theoretical literature on tax evasion (Allingham and Sandmo 1972; Mookherjee 1998) demonstrates that tax compliance is sensitive to economic incentives. The basic models of tax evasion focus only on the taxpayer and the factors that influence his behavior. In contrast, the second-generation models bring in another player: the tax collector. Furthermore, the tax collector himself is viewed as being corruptible. The latter models then analyze the joint behavior of the taxpayer and the tax collector in response to changes in the tax rate, probability of detection, penalty rate, and tax collector bonuses.

As such, these models suggest that a mechanical approach to tax administration based entirely on its logistics and which excludes the taxpayer and tax collector motivations may not be useful (Das Gupta and Mookherjee 1998). In this sense, these new models may provide some practical guide to the reform of the tax administration system.

Basic models of tax evasion

The basic models of tax evasion⁵ (Allingham and Sandmo 1972; Yitzhaki 1974) start with an income-maximizing taxpayer deciding how much of his income to declare for tax purposes, given some constant probability that evasion is detected and penalized with a fine. The taxpayer chooses the level of income he will report (or, alternatively, the amount of income he will hide from the taxman) by taking into account in his own personal calculus that if he successfully conceals some of his income from the tax collector, he will increase the amount of income he retains. On the other hand, if his action is detected and he is punished, then his retained income will be reduced by the amount of the fine. How the taxpayer decides to act is, then, largely dependent on the relative magnitude of the “temptation” and the “punishment” attendant to tax evasion (Das Gupta and Mookherjee 1998).

Penalty rate and probability of detection. In this context, tax compliance clearly improves as the penalty rate (or the size of the fine) and the probability of detec-

tion increases. On the one hand, the penalty rate is typically fixed and embodied in the tax laws. On the other hand, the probability of detection is determined by the ability of government to enforce the tax laws. Given this perspective, the more vigorous efforts to successfully prosecute tax offenders during the Aquino and Ramos administrations together with the introduction of stiffer penalties and creation of special tax courts in the early 1990s are steps in the right direction.⁶

Tax rate. At the same time, the impact of increasing the tax rate on compliance is not as straightforward. An increase in the tax rate will increase the temptation to cheat but it will also increase the penalty for cheating if the fines are imposed on an *ad valorem* basis. If the taxpayer's qualms about being caught do not increase with the amount of taxes being evaded, the punishment effect is shown to dominate and an increase in the tax rate leads to better compliance (Yitzhaki 1974). This finding runs counter to the conventional wisdom that follows from the so-called Laffer curve.⁷

Graduated penalties. These models also indicate that maximal penalties for small amounts of evasion may induce taxpayers to evade by large amounts. In turn, this result suggests that penalties as well as the effort to prosecute must be graduated with the scale of evasion (Mookherjee and Png 1994).

Second-generation models

The basic models of tax evasion discussed above essentially view the probability of detection and the penalty rate as exogenous. By accounting for the presence

⁵This model is also referred to as a model of voluntary tax compliance.

⁶Das Gupta and Mookherjee (1998) noted that none of the cases handled by the Prosecution Division of the BIR between 1980-1984 had resulted in a conviction by 1986. In contrast, the number and effectiveness of tax fraud investigations increased between 1986 and 1991, with the prosecution of tax fraud cases resulting in the jailing of several prominent individuals.

⁷The Laffer curve purports that raising tax rates beyond some level leads to reductions in tax revenues (Stiglitz 1988).

of corruptible tax officials, the second-generation models make the probability of detection endogenous. In effect, tax evasion does not only depend on the incentives to the taxpayer but also on the incentives to the tax collector and the interaction between the two players (Das Gupta and Mookherjee 1998).

In the second-generation models, the probability of evasion being detected is viewed as a function of the cost to the taxpayer of underreporting income. This cost, in turn, depends on the penalty rate and the amount of effort put in tax enforcement. When evasion is discovered, the tax collector decides whether to report it and impose a penalty. His decision depends on the incentive structure that he faces. Thus, if the tax collector underreports evasion successfully, he gets a bribe in addition to his government salary. However, if he gets caught, he is punished in the form of a fine, transfer to another assignment or, at worst, dismissal from office (all of which translates to a loss in income). The probability that the errant tax collector gets caught is dependent on the quality of supervision over tax examiners and third-party audit. On the other hand, if the tax collector decides to report the delinquent taxpayer, he may be al-

"In the situation where a taxpayer decides to evade taxes by some amount, corruption will occur if the collective benefit of the taxpayer and the tax collector...is positive."

lowed to retain, as a reward or bonus, some portion of the additional revenue that is generated because of his vigilance. In the final analysis, the tax collector's decision is then dependent on the relative strength of the carrot and the stick: the amount of the bribe, the amount of the reward/bonus, the amount of the fine/penalty and the probability of being caught.

In the situation where a taxpayer decides to evade taxes by some amount, corruption will occur if the collec-

tive benefit of the taxpayer and the tax collector (i.e., the expected benefit to the taxpayer in terms of additional retained income less the bribe he has to pay minus the expected cost to the taxman in terms of the penalties for bribery and foregone bonus pay) is positive. Moreover, in a corrupt regime, the taxpayer will select the amount of tax to evade while the tax collector will select the effort devoted to monitoring and, thus, the probability of detecting evasion (Mookherjee 1998).

Tax audit and declared income. These newer models have then been used to evaluate alternative practical measures in improving tax enforcement and the probability of detection. In particular, the original Allingham-Sandmo model has been extended to evaluate how audit frequency should vary with declared income (Das Gupta and Mookherjee 1998). The results of this work show that for a given class of taxpayers, audit frequency and declared income ought to be negatively related. Intuitively, this implies that a tax administration system that unduly focuses on high income tax returns may be encouraging taxpayers to evade by large amounts precisely because doing so reduces the probability that they will be subjected to the scrutiny of tax examiners. Conversely, the tax administration system may deter taxpayers from evading "too much" by threatening to audit low-income tax returns just as intensively as high-income tax returns.

The productivity of each audited case may indeed be greater for large taxpayers. However, owing to the pervasive effect of this policy on overall tax compliance, the growth in total tax receipts may be higher if small/medium taxpayers are likewise not neglected (Silvani 1992). This result is not entirely consistent with the emphasis currently being given to large taxpayers per se without any clear audit selection strategy being defined. The prevailing audit rate of less than 1.5 percent per year is also low when compared with other developing countries (Das Gupta and Mookherjee 1998).

Tax amnesties. In like manner, the basic model of tax evasion has also been modified to assess the impact of tax amnesties on tax revenues and tax compliance.

"...If tax enforcement is weak, the amnesty rate may have to be set at a very low rate in order to induce a significant response from delinquent taxpayers. In deciding whether or not to declare additional income/assets during an amnesty, a taxpayer compares the liability arising from the disclosure with the expected costs of not declaring said income..."

applicable to ordinary income disclosures.

The model of tax amnesties yields a number of interesting results (Das Gupta and Mookherjee 1998). One, it suggests that if tax enforcement is weak,

The avowed objective of most tax amnesty programs is to induce taxpayers to report previously hidden income and assets. Consequently, tax amnesty is aimed at curbing evasion by expanding the tax net to cover hitherto unreported income and assets. Essentially, though, tax amnesties are meant to allow the government to short-circuit the tax enforcement process by allowing taxpayers who are currently under investigation or prosecution to "settle" their dues voluntarily, usually by applying a more lenient tax rate. In this sense, the tax amnesty permits the government to save on costs of monitoring and prosecution, funding of which is oftentimes not forthcoming.

Although most tax amnesty programs are designed to be one-shot affairs, they have, in fact, been offered repeatedly in many countries.⁸ Amnesties may differ as to whether they are revision amnesties (i.e., an opportunity for taxpayers to revise past returns), investigation amnesties (i.e., a promise not to investigate the source of income disclosed), or prosecution amnesties (i.e., an immunity from prosecution for detected offenders).⁹ Oftentimes, but not always, the amnesty rate is discounted. That is, the tax rate applicable to income disclosures during the amnesty period is below the tax rate

the amnesty rate may have to be set at a very low rate in order to induce a significant response from delinquent taxpayers. In deciding whether or not to declare additional income/assets during an amnesty, a taxpayer compares the liability arising from the disclosure with the expected costs of not declaring said income (i.e., the sum of the expected penalties in the event that the undisclosed income is discovered during the amnesty period and the expected future stream of additional after-tax income arising from undeclared income if the erring taxpayer is not caught). If the former is smaller than the latter, the taxpayer will decide to declare hidden income. However, if the tax administration system is ineffective, the expected cost of not disclosing hidden income is small because the probability of said evasion being detected is also small. In such a situation, expected compliance gain from the amnesty is minimal.

Two, if the tax amnesty is anticipated (because the government repeatedly offers tax amnesties), there will be an increase in tax evasion prior to the amnesty. Moreover, if tax enforcement is poor, anticipated tax amnesties cause aggregate revenues to fall. The drop in revenues results from the higher incidence of evasion in the years prior to the amnesty and the discounted amnesty rates that delinquent taxpayers pay during the amnesty year. This explains why the tax take from the numerous tax amnesties offered by the government (10 full between 1972 and 1981 and many partial amnesties since 1986) has progressively gotten smaller (Das Gupta and Mookherjee 1998).

⁸This holds true for the Philippines which offered 10 tax amnesties between 1972 and 1981 and still another one in 1986. In addition, a scheme offering "last priority" audit was given in 1982, 1987, 1993 and 1999. Such schemes guarantee that taxpayers who declare income that is higher than the previous year by a specified amount are given low priority in the selection of audit. These then represent partial audit amnesties from investigation (Das Gupta and Mookherjee 1998).

⁹In the Philippines, most of the tax amnesties offered to date provide immunity from investigation.

Incentive bonuses for tax collectors. Other extensions of the basic model focused on the alternative com-

pensation provisions for tax collectors. One option is the payment of salaries that are higher than the market rate. Another option is the institution of a pay-for-performance scheme whereby the tax collector is allowed to retain part of the additional revenues generated from the reported evasion. In either case, it is found that where the government's ability to punish corruption is weak, it may be better not to pay tax collectors higher than market salaries since higher compensation may simply increase the bribe level. At the same time, higher-than-market wages may increase the tax collectors' desire to stay in their jobs, thereby reducing their interest in reporting evaders with strong political connections. Another drawback of performance-based incentives is the possibility that they may induce the harassment of taxpayers. Mookherjee (1998) noted that the higher the bonus rate and the cost of taxpayer appeal are and the lower the rate of success of taxpayer appeal is, the greater the likelihood of taxpayer harassment would be.

Implications on tax administration

Mookherjee (1998) thus argues that piecemeal incentive reform may increase corruption. "Because reforms in incentive systems and organizational procedures are complementary, reforms are more likely to succeed if they are comprehensive rather than incremental." In this regard, the list of organizational reforms includes: (1) improving personnel quality; (2) institutionalizing independent third-party audits; (3) limiting discretionary authority of tax examiners; (4) introducing functional specialization in tax administration; (5) increasing computerization; (6) improving the appeal mechanism; and (7) reducing high-level political interference.

* *Increasing the compensation of tax collectors and examiners will be useless if it is not accompanied by the greater flexibility on the part of the tax administra-*

tion agency to hire and fire personnel. More stringent criteria for screening new recruits and for promoting existing personnel will greatly enhance the quality of tax administration. Moreover, clear procedures for dealing with reports of corrupt behavior and even-handed application of sanctions for the same should be strictly observed at all times.

* *Independent third-party audits are necessary in evaluating the audits undertaken by tax examiners.* This system will tend to increase the probability of detecting corruption. Mexico's experience in this area has been positive and should be considered. For instance, if an audit yields no additional assessment, the case cannot be closed by the original tax examiner but must be referred to an officer in a different department. If x days pass without any result, the original audit team is replaced by a new one. Audit results are reported to a representative of the industry to which the taxpayer belongs. If the industry group disagrees with the assessment, the case is referred to the vigilance department. Any auditor guilty of harassment is subject to prosecution.

"Increasing the compensation of tax collectors and examiners will be useless if it is not accompanied by the greater flexibility on the part of the tax administration agency to hire and fire personnel."

* *A centralized audit selection system could reduce the scope for the discretionary authority of tax examiners.* Such a scheme requires a centralized information base and a strict procedure for audit selection.

* *Organizing the tax administration agency along functional lines will tend to reduce collusion of taxpayers and tax collectors.* It will minimize the possibility of the taxpayer having to deal with the same tax officer for diverse tax functions as filing of returns, obtaining refunds, responding to audits, and lodging appeals.

* *The benefits from increased tax computerization cannot be overemphasized as greater computeriza-*

"There is a need to re-assess existing tax administration practices within the context of how the prevailing institutional arrangements create economic incentives that affect the behavior of both taxpayers and tax collectors."


tion improves the tax collection agencies' access to internal as well as external sources of information. This makes possible the matching of tax returns with third-party information. It also enhances the ability of the tax collection agency to automate the generation of overdue notices which enhances voluntary compliance. Moreover, it makes it more difficult to tamper with records. Furthermore, it facilitates automated audit selection, thus reducing the discretion of tax examiners.

* *The appeals process can be enhanced by improving the procedures for the filing of complaints, setting of time limits for judgments, and establishment of appropriate burden of proof.*

* *Efforts to eliminate bureaucratic corruption are quixotic at best in systems with strongly entrenched political corruption* (Mookherjee 1998). Thus, if tax evaders have recourse to political influence such that tax audit exposes the tax examiner to disciplinary action from higher-ups, then no reform of the incentive structure will work.

Given all these, there is therefore a need to re-assess existing tax administration practices within the context of how the prevailing institutional arrangements create economic incentives that affect the behavior of both taxpayers and tax collectors.

Epilogue: There is a widespread consensus that the simplification of the tax structure (in the direction of fewer exemptions, and less differentiation of tax rates

across sectors and activities) will ease tax administration (Gillis 1989). Many of the tax laws enacted in the Philippines in the last 15 years were justified on this ground. However, a review of the experience gives one a sense that the tax structure has been the subject of unnecessary finetuning, at best, and excessive flip-flopping, at worst. These frequent changes in the tax code simply and necessarily impose an additional burden on tax administration without addressing the complexities that naturally accompany economic development. 

Bibliography

- Allingham, M. and A. Sandmo. 1972. Income tax evasion: a theoretical analysis. *Journal of Public Economics* 1.
- Das Gupta, A. and D. Mookherjee. 1998. *Incentives and institutional reform in tax enforcement: an analysis of developing country experience*. Delhi: Oxford University Press.
- Manasan, R.G. 1998. Fiscal adjustment in the context of growth and equity, 1986-1996. *PIDS Discussion Paper Series No. 98-11*. Makati City, Philippines: Philippine Institute for Development Studies.
- Mookherjee, D. 1998. Incentive reforms in developing country bureaucracies: lessons from tax administration. Annual World Bank Conference on Development Economics 1997, World Bank, Washington, D.C.
- and I. Png. 1994. Marginal deterrence in enforcement of law. *Journal of Political Economy* 102, 5.
- Schick, A. 1998. Why most developing countries should not try New Zealand's reforms. *The World Bank Research Observer* 13, 1.
- Yitzhaki, S. 1974. A note on income tax evasion: a theoretical analysis. *Journal of Public Economics* 3.

For further information, please contact

The Research Information Staff
Philippine Institute for Development Studies
NEDA sa Makati Building, 106 Amorsolo Street
Legaspi Village, Makati City
Telephone Nos: 8924059 and 8935705;
Fax Nos: 8939589 and 8161091
E-mail: rmanasan@pidsnet.pids.gov.ph
jliguton@pidsnet.pids.gov.ph

The *Policy Notes* series is available online at
<http://www.pids.gov.ph>